

## CLAIMS

What we claim as our invention is:

1. In a communications system, a push-to-talk communication device to participate in a group communication net, said group communication net a controller to manage said group communication net and interface with said push-to-talk communication device, said device comprising:

4 a processor to convert information signals into packet data suitable for  
8 transmission over a distributed network;

10 a transmitter to transmit packet data through a first channel to said controller;

12 a receiver to receive packet data through a second channel from said controller;

14 and

16 a user activated mechanism to activate said transmitter when a user of said  
20 communication device to transmit said packet data to said controller.

22 2. The apparatus of Claim 1, wherein said communication devices is a wireless  
24 communication device.

26 3. The apparatus of Claim 1, further comprising memory to store said packet data  
28 until said controller is ready to receive said packet data.

30 4. The apparatus of Claim 3, wherein said memory is used to minimize perceived  
32 latency of a user.

34 5. The apparatus of Claim 1, wherein said processor further comprises an a  
36 dynamically configurable priority level, wherein said priority level determines whether  
38 said communication device has the authority to gain transmission privilege over another  
40 communication device such that said communication device may interrupt the  
42 transmission of said communication device having a lower priority level.

44 6. The apparatus of Claim 5, wherein said assignment of priority level is  
46 dynamically configurable.

7. The apparatus of Claim 1, wherein said processor receives information from said  
2 controller regarding said group communications net.

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8. The apparatus of Claim 1, wherein said communication device operates in a  
2 secure mode.

9. The apparatus of Claim 1, wherein said processor further comprises identification  
2 information, and wherein said processor updates its identification information when its  
4 current identification information has or is about to change, and transmits its new  
identification information to said controller.

6 10. The apparatus of Claim 1, wherein said group communications net is capable of  
being in a dormant mode, and wherein activation of said user activated mechanism  
8 prompts said controller to bring the communications net out of said dormant mode.

10 11. In a communications system, an apparatus to adapt a communication device to  
participate in a group communication net, said group communication net comprising at  
12 least two communication devices and having a controller to manage said group  
communication net and interface with said communication device, said apparatus  
14 comprising:

16 a first port to establish a first channel with said controller;  
16 a processor electrically connected to said first port, wherein said processor is  
dynamically configurable to send packet data through said first channel to said controller;  
18 and  
20 a user activated mechanism to allow a user of said communication device to  
transmit said packet data to said controller.

22 12. The apparatus of Claim 11, wherein said packet data comprises time-sensitive  
information.

24 13. The apparatus of Claim 11, wherein at least one of said communication devices is  
2 a wireless communication device.

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14. The apparatus of Claim 11, further comprising memory to store said packet data  
2 until said controller is ready to receive said packet data.

15. The apparatus of Claim 14, wherein said memory is used to minimize perceived  
2 latency of a user.

16. The apparatus of Claim 11, wherein said packet data comprises at least one of  
2 identification data of said communication device, location data of said communication  
device, and control data to establish, modify, or terminate group communications.  
4

17. The apparatus of Claim 11, wherein said first channel further comprises a signal  
2 initiation protocol (SIP) channel, a media signaling channel, and a media traffic channel.

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18. The apparatus of Claim 11, wherein said processor further comprises a priority  
2 level, wherein said priority level determines whether said communication device has the  
authority to gain transmission privilege over another communication device such that  
4 said communication device may interrupt the transmission of said communication device  
having a lower priority level.  
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19. The apparatus of Claim 18, wherein said assignment of priority level is  
2 dynamically configurable.

20. The apparatus of Claim 11, wherein said communication device may operate in  
2 different communication infrastructures.

21. The apparatus of Claim 11, wherein said processor receives information from said  
2 controller regarding said group communications net.

22. The apparatus of Claim 11, wherein said communication device operates in a  
2 secure mode.

23. The apparatus of Claim 11, wherein said processor further comprises  
2 identification information, and wherein said processor updates its identification

information when its current identification information has or is about to change, and  
4 transmits its new identification information to said controller.

24. The apparatus of Claim 11, wherein said group communications net is capable of  
2 being in a dormant mode, and wherein activation of said user activated mechanism  
prompts said controller to bring the communications net out of said dormant mode.

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25. In a communications system, a push-to-talk communication device to participate  
2 in a group communication net, said group communication net a controller to manage said  
group communication net and interface with said push-to-talk communication device,  
4 said device comprising:

6 a processor to convert information signals into packet data suitable for  
8 transmission over a distributed network, wherein said processor further comprises  
identification information, and wherein said processor updates its identification  
8 information when its current identification information has or is about to change, and  
transmits its new identification information to said controller;

10 a transmitter to transmit packet data through a first channel to said controller;  
12 a receiver to receive packet data through a second channel from said controller;

14 and  
a user activated mechanism to activate said transmitter when a user of said  
communication device to transmit said packet data to said controller.

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